

# Software Product Description

**PRODUCT NAME: VMS Services for PCs\*, Version 3.1**

**SPD 30.50.06**

## DESCRIPTION

The Personal Computing Systems Architecture (PCSA) is an extension of Digital Equipment Corporation's systems and networking architecture that merges the VMS, DOS, and OS/2™ environments. PCSA provides a framework for integrating personal computers into an organization's total information system so that different types of users can share information, large system resources and network services across the entire organization.

The PCSA family of software products includes:

- VMS Services for PCs - Software to allow a VMS system to act as a file, print, mail, and disk server to personal computers, described in this document.
- DECnet PCSA Client for DOS - Required software for the DOS personal computer to use the facilities provided by VMS Services for PCs (described in this document), PCSA for OS/2 server software (described in SPD 55.24.xx), or VAXmate Services for MS-DOS® (described in SPD 55.07.xx.).
- PCSA for OS/2 - Required software for the OS/2 personal computer to use the facilities provided by VMS Services for PCs (described in this document) and/or make the file and print facilities of an OS/2 system available to other personal computers (described in SPD 55.24.xx.).
- DECnet/PCSA Client: VAXmate - Required software for VAXmates to use the facilities provided by VMS Services for PCs (described in this document) or VAXmate Services for MS-DOS (described in SPD 55.10.xx).
- VAXmate Services for MS-DOS - Software that allows a VAXmate with an expansion box to act as a dedicated server to DOS computers (described in SPD 55.09.xx).

The PCSA products are based on DECnet and the right to use VMS Services for PCs software is included in the DECnet-VAX license. Other DECnet-VAX facilities are described in SPD 25.03.xx.

VMS Services for PCs software, a DECnet application, implements PCSA allowing VAX, MicroVAX, VAXstation and VAXserver computers to act as application, data and resource servers to groups of personal computers. By using these server systems, personal computers can share applications, data and resources, access information from remote systems on the network, and apply that information in DOS or OS/2 applications.

VMS Services for PCs software provides the following services for personal computers running DECnet PCSA Client for DOS and PCSA for OS/2 client software:

- File Services
- Disk Services
- Print Services
- Time and Date Services
- Server Management and Control
- Remote Boot Services (DOS clients only)
- Broadcast Utility
- Mail Services

**Note:** For the purposes of this Software Product Description, the term "DOS" refers to all disk operating system software supported by DECnet PCSA Client for DOS software. (See System Support Addendum 55.07.xx.x). The term "OS/2" refers to all operating system software supported by PCSA for OS/2 software. (See SPD 55.24.00-x).

### *File Services*

Through the integration of Microsoft's SMB protocols with DECnet, VMS Services for PCs software provides a remote DOS and OS/2 file system that appears as a transparent extension of the client system's local computing environment. Because DECnet communications protocols are used for the file service, a PCSA client can access a server in a DECnet LAN or in a DECnet WAN.

\* (Formerly VAX/VMS Services for MS-DOS)



Each DOS or OS/2 file stored through the file service is stored as a VMS file: either a Stream file or an RMS Sequential Fixed-Length Record (512 record bytes) file type. The files stored through the file service are accessible to VMS users and applications that can interpret the content and organization of the file written by the client application.

The server can read all RMS file types that can be read sequentially, allowing client applications to read files written by a VMS application. Each read issued by the client application will result in the presentation to the application of the next "n" data bytes contained sequentially in the file.

Users can share DOS and OS/2 files stored on the server's disk through concurrent access; access is made possible through the DOS and OS/2 file access modes as well as through sequential usage of files.

Byte-range locking is supported for DOS and OS/2 applications accessing files provided through the file service.

Refer to *Server Management and Control* section of this SPD for further information on access control.

The DOS and OS/2 utilities that are specific to PC hardware devices cannot be used with file services, such as CHKDSK, FDISK, DISKCOPY, DISKCOMP and FORMAT.

### Disk Services

Through Digital's Local Area Systems Transport (LAST) protocol, VMS Services for PCs software provides PC clients with local area disk services. The local area disk service sets aside space on a VMS disk for clients to access as a virtual disk, that is a DOS or OS/2-formatted remote disk. Because LAST is a LAN-only communications protocol, overhead is low and performance high.

Local area disk services are accessible through DECnet PCSA Client for DOS and PCSA for OS/2 client software using LAST in a Local Area Network (LAN) and through the Network Device Utility (NDU) using DECnet in a Wide Area Network (WAN). DECnet PCSA Client for DOS and PCSA for OS/2 client software can also access virtual disks created with NDU. Access to local area disks in extended LANs where bridge transfer speeds are less than 10Mb/seconds is provided by NDU.

Disk management may be done from the VAX or remotely from the personal computer.

The local area disk service has the following restrictions:

- Only one client at a time may have read and write access to the local area disk.
- Multiple readers (and no writers) to a local area disk are allowed.

The local area disk's size is established at its creation and can be 360K bytes, 720K bytes, 1.2M bytes, 1.44M bytes, 5M bytes, 10M bytes, 20M bytes, or 32M bytes.

Refer to *Server Management and Control* section for further information on access control.

### Print Services

VMS Services for PCs software allows DOS, OS/2, and VMS users to share printers connected to a VAXserver or VAXcluster in a LAN or WAN. PCSA clients can send files to the remote printer from DOS, OS/2, Microsoft Windows (DOS clients only) or from applications. PC clients can also delete a remote print entry and can associate some VMS printing parameters with a redirected logical print device. PC clients can see all entries for a node or queue.

The system administrator assigns a service name to a VMS print queue and may define user access to the print service. The DECnet PCSA Client for DOS and PCSA for OS/2 client software redirects printer I/O from a client printer logical name to a defined print service.

The system administrator's utility in VMS Services for PCs software can create the physical and generic queues and define forms for selected Digital printers.

Multiple queues may be set up for the same printer. For example, separate queues may be created for Digital and IBM® Proprietary mode for the Digital LA75 and LN03 PLUS with ISO/PC cartridge. Separate queues for landscape and portrait modes may be created for the LN03 PLUS and LN03 (text only).

In addition, other printer queues can be manually set to support other Digital and third-party printers.

### Time and Date Services

DOS and OS/2 clients can request date and time from the server.

### Server Management and Control

When a server offers a file resource or a print resource for use, an Access Control List specifying privileges assigned to users can be associated with the resource. Only users who provide the correct username and password can then access that service.

Service and file access is supported across a VAXcluster. In a VAXcluster, one service database may be used for the cluster, or a separate service database can be defined for each node.

The file service uses VMS Access Control Lists to determine user access to files within services.



The system administrator can restrict the number of simultaneous client connections to a given service on the server. This capability means the system administrator can restrict access to DOS or OS/2 applications stored in the directory, to ensure compliance with vendor licensing agreements. Other restrictions on the use of the server can be imposed to help meet performance and security goals.

An administrator's utility is provided to allow the system administrator to add and remove services, register clients, and list resources. The server software can list current connections, current file opens, current sessions, and current services available, as well as show various counters.

Network and server events, such as notices about connections being opened and closed, can be logged in a file while the server runs.

#### *Remote Boot Services (DOS clients only)*

VMS Services for PCs software also enables remote boot for VAXmates and DOS personal computers with Digital's DEPCA or DEMCA PC Ethernet controllers. DOS personal computers using other supported Ethernet controllers can remote boot utilizing the supplied Remote Boot Software diskette. The administrator's utility provides facilities to add, delete, and list workstations to be booted remotely.

#### *Broadcast Utility*

A Broadcast Utility is provided to allow the system administrator to send messages to workstations connected to the local area network. Broadcast can be used to send messages to all client PCs or to specific client PCs.

#### *Mail Services*

The server provides an electronic mail message capability to connected PCs. The server provides the PC user access to a subset of VMS mail features. It provides the PC user with filing, distribution lists, and delivery capabilities. At the login for each PCSA session, the server can notify the user of any new mail messages.

## INSTALLATION

Digital requires that a customer's first purchase of this software product at each site include Digital's PCSA DECstart (QS938-SZ), formerly titled MS-DOS Workstation Integration Service for VAX Servers. This service provides implementation support for customers installing VMS Services for PCs software and the integration of the DOS workstations into the Digital network.

## HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 30.50.06-x).

## SOFTWARE REQUIREMENTS \*

VMS Operating System

DECnet-VAX

- \* Refer to the System Support Addendum (SSA 30.50.06-x) for availability and required versions of prerequisite/optional software.

## ORDERING INFORMATION

Software Media: QA-A93\*-\*\*

Software Documentation: QA-A93\*A-GZ

Software Media and Documentation: QA-A93\*A-H\*

Software Product Services: QT-A93\*-\*\*

- \* Denotes variant fields. For additional information on available licenses, services and media, refer to the appropriate price book.

## SOFTWARE LICENSING

The license options for DECnet-VAX include the right to use VMS Services for PCs software. See the DECnet-VAX Software Product Description (SPD 25.03.xx) for information regarding DECnet-VAX licenses. You will need a separate DECnet-VAX license for each server CPU on which you will be using the software product (except as otherwise specified by Digital).

For your first installation of this software product, you must purchase as a minimum for each server:

- Single-Use License Option (a DECnet-VAX license: See SPD 25.03.xx)
- In addition, you must purchase a DECnet PCSA Client for DOS license for each DOS PC (see SPD 55.07.xx), a DECnet/PCSA for OS/2 client license for each OS/2 PC (see SPD 55.24.xx), and a VAXmate license for each VAXmate (see SPD 55.10.xx).

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

## SOFTWARE PRODUCT SERVICES

A variety of service options are available from Digital. For more information, contact your local Digital office.

## SOFTWARE WARRANTY

